

CLAIMS

What is claimed is:

- 1 1. A method of managing subscriber data in a telecommunications system, comprising
2 the steps of:
3 receiving one or more messages from a mobile station;
4 requesting the subscriber data from a first database, the subscriber data containing
5 circuit switching data, packet switching data, or circuit switching data and packet switching
6 data;
7 receiving the subscriber data from the first database; and
8 storing the subscriber data in the second database.
- 1 2. The method as recited in claim 1, wherein the first database is a home location
2 register.
- 1 3. The method as recited in claim 1, wherein the second database is a universal visitor
2 location register located in a new service area.
- 1 4. The method as recited in claim 1, further comprising the step of communicating one
2 or more messages with one or more databases in response to the one or more messages from
3 the mobile station.

1 5. The method as recited in claim 1, wherein the step of requesting the subscriber data
2 from the first database comprises the step of sending one or more messages to the first
3 database to request the subscriber data.

1 6. The method as recited in claim 4, wherein the step of communicating one or more
2 messages with one or more databases comprises:
3 sending one or more messages to a third database; and
4 receiving one or more messages from the third database in response to the one or
5 more messages being sent to the third database.

1 7. The method as recited in claim 6, wherein the third database is a universal visitor
2 location register located in an old service area.

1 8. The method as recited in claim 6, wherein the third database is a SGSN located in an
2 old service area.

1 9. The method as recited in claim 6, wherein the third database is a VLR located in an
2 old service area.

1 10. The method as recited in claim 5, wherein the one or more messages being sent to the
2 first database to request the subscriber data is an update location signal.

1 11. The method as recited in claim 5, wherein the one or more messages received from
2 the mobile station at the second database is a routing area update request signal.

1 12. The method as recited in claim 6, wherein the one or more messages being sent to the
2 third database is a context request signal.

1 13. The method as recited in claim 6, wherein the one or more messages received by the
2 second database is a context response signal.

1 14. The method as recited in claim 6, wherein the one or more messages being sent to the
2 third database is a send identification signal.

1 15. The method as recited in claim 6, wherein the one or more messages received by the
2 second database is a send identification acknowledgment signal.

1 16. The method as recited in claim 1, further comprising the step of communicating one
2 or more messages between the first database and a third database in response to the step of
3 requesting the subscriber data from the first database.

1 17. The method as recited in claim 16, wherein the step of communicating one or more
2 messages between the first database and the third database comprises the steps of:

3 sending one or more messages from the first database to the third database; and

4 sending one or more messages from the third database to the first database in
5 response to the one or more messages sent by the first database.

1 18. The method as recited in claim 17, wherein the one or more messages being sent to
2 the third database is a cancel location signal.

- 1 19. The method as recited in claim 17, wherein the one or more messages being to the
2 first database is a cancel location acknowledgment signal.
- 1 20. The method as recited in claim 1, wherein the mobile station is roaming from an old
2 service area to a new service area.

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1 21. A method of restoring subscriber data of a mobile station in one or more network
2 devices, comprising the steps of:

3 receiving a request to restore the subscriber data from the one or more network
4 devices, the subscriber data containing circuit switching data, packet switching data, or
5 circuit switching data and packet switching data;

6 setting one or more indicators in a first database; and

7 coordinating with at least a second database to make the subscriber data consistent.

1 22. The method as recited in claim 21, further comprising the steps of:

2 determining whether the subscriber data is stored in the first database; and

3 receiving the subscriber data from the second database when the subscriber data is not
4 stored in the first database.

1 23. The method as recited in claim 21, wherein the one or more indicators indicates
2 whether the first database record of location area identity is confirmed by radio contact.

1 24. The method as recited in claim 21, wherein the one or more indicators indicates
2 whether the subscriber data stored in the first database is consistent with the subscriber data
3 stored in the second database.

1 25. The method as recited in claim 21, wherein the one or more indicators indicates
2 whether the second database record of the first database number of the mobile station is
3 confirmed by radio contact.

1 26. The method as recited in claim 21, wherein the first database is a universal visitor
2 location register.

1 27. The method as recited in claim 21, wherein the second database is a home location
2 register.

1 28. A telecommunications system comprising:
2 a first database containing subscriber data of one or more mobile subscribers, the
3 subscriber data containing circuit switching data, packet switching data, or circuit switching
4 data and packet switching data;
5 a second database communicably linked to the first database, wherein the second
6 database is for receiving the subscriber data contained in the first database and storing the
7 subscriber data for subscribers roaming within a service area covered by the second database;
8 and
9 one or more network devices connected to the second database, the one or more
10 network devices are for providing one or more types of telecommunications services to the
11 one or more mobile subscribers based upon the subscriber data.

1 29. The system as recited in claim 28, further comprising:
2 one or more service areas; and
3 wherein each service area includes one or more first databases, the second database
4 and the one or more network devices.

1 30. The system as recited in claim 28, wherein the first database is a home location
2 register.

1 31. The system as recited in claim 28, wherein the second database is a universal visitor
2 location register.

1 32. The system as recited in claim 28, wherein the one or more network devices
2 comprises: one or more mobile switching centers for providing circuit switching services to
3 the one or more mobile subscribers.

1 33. The system as recited in claim 28, wherein the one or more network devices
2 comprises: one or more signaling nodes for providing packet switching services to the one or
3 more mobile subscribers.

1 34. A computer program for managing subscriber data in a telecommunications system
2 embodied on a computer readable medium, the computer program comprising:
3 a code segment for receiving one or more messages from a mobile station;
4 a code segment for requesting the subscriber data from a first database, the subscriber
5 data containing circuit switching data, packet switching data, or circuit switching data and
6 packet switching data;
7 a code segment for receiving the subscriber data from the first database; and
8 a code segment for storing the subscriber data in the second database.

1 35. The computer program as recited in claim 34, further comprising the step of a code
2 segment for communicating one or more messages with one or more databases in response to
3 the one or more messages from the mobile station.

1 36. The computer program as recited in claim 34, wherein the code segment for
2 requesting the subscriber data from the first database comprises the code segment for sending
3 one or more messages to the first database to request the subscriber data.

1 37. The computer program as recited in claim 34, wherein the code segment for
2 communicating one or more messages with one or more databases comprises:
3 a code segment for sending one or more messages to a third database; and
4 a code segment for receiving one or more messages in response to the one or more
5 messages being sent to the third database.

- 1 38. The computer program as recited in claim 34 further comprising a code segment for
- 2 communicating one or more messages between the first database and a third database in
- 3 response to the step of requesting the subscriber data from the first database.

1 39. A computer program for restoring subscriber data of a mobile station in one or more
2 network devices comprising:
3 a code segment for receiving a request to restore the subscriber data from the one or
4 more network devices, the subscriber data containing circuit switching data, packet switching
5 data, or circuit switching data and packet switching data;
6 a code segment for setting one or more indicators in a first database; and
7 a code segment for coordinating with at least a second database to make the
8 subscriber data consistent.

1 40. The computer program as recited in claim 39, further comprising:
2 a code segment for determining whether the subscriber data is stored in the first
3 database; and
4 a code segment for receiving the subscriber data from the second database when the
5 subscriber data is not stored in the first database.

1 41. The computer program as recited in claim 39, wherein the first database is a universal
2 visitor location register.

1 42. The computer program as recited in claim 39, wherein the second database is a home
2 location register.